

[0098] As described in detail above, according to the present invention, an optimal communication environment can be secured without adjusting the position of a data terminal, a satellite station or a satellite station antenna, by adopting a satellite station antenna the radiating directivity characteristic of which can be freely changed, transmitting a control frame from the satellite station, the master station starting to return a carrier wave, the satellite station determining such a direction of antenna directivity characteristic that a carrier wave transmitted from the master station may be received with the maximum intensity, and fixing the directivity characteristic of a satellite station antenna to the direction of the master station in a wireless LAN system mainly using a millimeter wave.

[0099] Furthermore, the wireless LAN system can automatically cope with the deterioration of a communication environment due to the movement of a data terminal or a satellite station, or the shift of the position of an antenna, and the best communication quality can be always provided by setting conditions for the number of error frames allowed to be received in a satellite station, or the receiving electric field intensity of a data frame, and determining an optimal antenna directivity characteristic again when the conditions are not met.

[00100] The power in the master station can also be saved by making the intensity of a carrier wave transmitted from the master station while determining, less than the intensity at the time of normal data communication.

[00101] Accordingly, according to the present invention a strong and flexible wireless LAN system can be constructed, and the present invention greatly contributes to the realization of a high-speed wireless LAN system using a millimeter wave in an unused wave range assigned to data communication.